HSR Health Services Research

DOI: 10.1111/1475-6773.12411
BEST OF 2015 ACADEMY HEALTH ANNUAL RESEARCH MEETING

Effect of Medicaid Expansions on Health Insurance Coverage and Access to Care among Low-Income Adults with Behavioral Health Conditions

Hefei Wen, Benjamin G. Druss, and Janet R. Cummings

Objective. To examine the effect of Medicaid expansions on health insurance coverage and access to care among low-income adults with behavioral health conditions.

Data Sources/Study Setting. Nine years (2004–2012) of individual-level cross-sectional data from a restricted-access version of National Survey on Drug Use and Health.

Study Design. A quasi-experimental difference-in-differences design comparing outcomes among residents in 14 states that implemented Medicaid expansions for low-income adults under the Section §1115 waiver with those residing in the rest of the country.

Data Collection/Extraction Methods. The analytic sample includes low-income adult respondents with household incomes below 200 percent of the federal poverty level who have a behavioral health condition: approximately 28,400 low-income adults have past-year serious psychological distress and 24,900 low-income adults have a past-year substance use disorder (SUD).

Principal Findings. Among low-income adults with behavioral health conditions, Medicaid expansions were associated with a reduction in the rate of uninsurance ($p < .05$), a reduction in the probability of perceiving an unmet need for mental health (MH) treatment ($p < .05$) and for SUD treatment ($p < .05$), as well as an increase in the probability of receiving MH treatment ($p < .01$).

Conclusions. The ongoing implementation of Medicaid expansions has the potential to improve health insurance coverage and access to care for low-income adults with behavioral health conditions.

Key Words. Medicaid, access/demand/utilization of services, mental health, substance abuse

One in four U.S. adults (i.e., approximately 56 million) suffers from a diagnosable mental health (MH) problem and/or a substance use disorder (SUD) (CBHSQ 2015), collectively referred to as behavioral health

conditions. Despite the growing body of evidence for the efficacy and cost-effectiveness of behavioral health care (Mechanic 2012, 2014), a significant proportion of adults with behavioral health conditions do not receive the care they need (Kessler et al. 2005; Mojtabai 2005). Lack of health insurance coverage poses a financial barrier to behavioral health care among those who perceive a need for treatment, especially among low-income adults (CBHSQ 2015).

The Affordable Care Act (ACA) is expected to narrow the insurance gap and treatment gap in behavioral health care, in part, through Medicaid expansions (Buck 2011; Mechanic 2012). Under the Medicaid State Plan Amendment (SPA) provision of the ACA, eligibility for Medicaid coverage is determined primarily by household income level.[1] The income-based eligibility rules eliminate the traditional "categorical" criteria and expand Medicaid coverage to many low-income adults who were previously ineligible for Medicaid.[2] Low-income adults are shown to have a disproportionally high prevalence of behavioral health conditions and a sizable unmet need for behavioral health care (Garfield et al. 2011; Busch et al. 2014; Mark et al. 2015), especially among some of the most vulnerable segments of the population such as former inmates released from jails/prisons (Cuellar and Cheema 2012). It is critical, therefore, to understand how Medicaid expansions may affect health insurance coverage and access to care among low-income adults with behavioral health conditions.

Since the SPA provision of the ACA did not come into effect until January 2014, a direct evaluation of the ongoing expansions is hindered by the time lag in data availability. To inform current discussion and implementation of Medicaid expansions in a timely manner, our study looks to previous expansions for low-income adults under the Section §1115 waiver. Between 2004 and 2012, 14 states implemented the Section §1115-waiver expansions. These waiver expansions provide useful policy variation along a broad spectrum that helps shed light on the behavioral health implications of Medicaid expansions in the post-2014 era.

Address correspondence to Hefei Wen, Ph.D., Department of Health Management & Policy, University of Kentucky College of Public Health, 111 Washington Avenue, Lexington, KY 40536; e-mail: hefei.wen@uky.edu. Benjamin G. Druss, M.D., M.P.H., and Janet R. Cummings, Ph.D., are with the Department of Health Policy & Management, Emory University Rollins School of Public Health, Atlanta, GA.

BACKGROUND

The Section §1115 Waiver Expansion

Before the ACA was signed into law, the Section §1115 waiver of the Social Security Act had long played a central role in state efforts to expand Medicaid coverage to populations who were otherwise ineligible for Medicaid. However, the majority of the Section §1115-waiver expansions did not target low-income adults until the early 2000s. In August 2001, the Bush Administration introduced a Health Insurance Flexibility and Accountability (HIFA) initiative under the Section §1115 waiver authority to provide a streamlined waiver approval process as well as a significant amount of funding support and policy flexibility for Medicaid expansions. The HIFA initiative created incentives for states to use the Section §1115 waiver to cover low-income adults with income threshold up to 200 percent FPL. In addition to the HIFA initiative, enactment of the ACA in April 2010 provided another boost to the use of the waiver in Medicaid expansions for low-income adults. State policy makers who sought to get an early start on the ACA Medicaid expansions prior to January 2014 were encouraged to do so under a waiver. During the period of transition to full implementation of the ACA Medicaid expansions, the Section §1115 waiver allowed states to enroll a proportion of low-income adults in Medicaid with income threshold up to 133 percent FPL.

Policy Variation in the Section §1115-Waiver Expansions

Under the Section §1115 waiver authority, state policy makers have a significant amount of policy flexibility in designing and implementing Medicaid expansions. The Section §1115 waiver provides states with two central mechanisms for expansion. One approach is to directly enroll the expansion population in a Medicaid program. An alternative "private" approach is to provide the expansion population with premium subsidies for the purchase of qualified private plans. Furthermore, certain Medicaid statutory requirements can be "waived" for an expansion program under a waiver. For instance, the Section §1115 waiver allows states to cap enrollment in an expansion program. It also relaxes the requirements for the amount of premium and cost sharing as well as the scope of the benefit package in an expansion program (Coughlin et al. 2006; Atherly et al. 2012; KFF 2013).

Between 2004 and 2012, 14 states implemented Medicaid expansions for low-income adults under the Section §1115 waiver. These waiver expan-

sions varied greatly from state to state. Seven states used the "private" premium assistance approach as the central mechanism for expansion, while the other seven enrolled the majority of the expansion populations in Medicaid (KFF 2013). Moreover, the expansion programs in Massachusetts, Vermont, Maryland, and the District of Columbia were comparable to a standard Medicaid program. Other states, however, provided less comprehensive programs for their expansion populations by capping enrollment, imposing a considerable amount of premium and cost sharing, and/or limiting important benefits such as behavioral health benefits.

The policy variation in the previous Section §1115-waiver expansions is especially useful when trying to understand the implications of the ongoing Medicaid expansions in the post-2014 era. As of July 2015, 23 states and the District of Columbia are implementing Medicaid expansions pursuant to the new SPA provision of the ACA. In addition, five states (i.e., Arkansas, Iowa, Michigan, Pennsylvania, and most recently Indiana) are moving forward with expansion using the Section 1115 waiver as a more flexible and politically viable alternative to the ACA. Along the broad spectrum of the previous Section §1115-waiver expansions, we can find precursors both to the ACA Medicaid expansions and to the waiver expansions in the post-2014 era.

Previous Literature on the Effect of the Section §1115-Waiver Expansions

Medicaid expansion for low-income adults has been shown to improve health insurance coverage and access to care among the target population. More specifically, empirical analyses of the early HIFA expansions suggest that these expansions were associated with reductions in the rate of uninsurance, premature mortality, and financial related delays in care among low-income adults (Coughlin et al. 2006; Atherly et al. 2012; Sommers, Baicker, and Epstein 2012). Moreover, a recent study reveals "a gradual ramp-up" of monthly Medicaid enrollment in three "early adopter" states that used the Section 1115 waiver to get a jump start on the ACA Medicaid expansions (Sommers, Kenney, and Epstein 2014). Lastly, single-state studies of the Massachusetts comprehensive health care reform and the Oregon Medicaid lottery experiment also show significant increases in health insurance coverage, self-reported health status, and access to preventive care following the implementation of these expansions (Baicker and Finkelstein 2011; Chen, Scheffler, and Chandra 2011; Kolstad and Kowalski 2012; Long, Stockley, and Dahlen 2012; Baicker et al. 2013).

Our study contributes to the literature by focusing on the effect of Medicaid expansions on health insurance coverage and access to care among low-income adults with behavioral health conditions. We also improve upon the existing studies by capitalizing on the policy variation in all Section 1115-waiver expansions implemented in 14 states between 2004 and 2012 and explicitly estimating the heterogeneous effects across key components of the waiver.

METHODS

Data and Sample

We pooled 9 years of individual-level cross-sectional data from a restricted-access version of National Survey on Drug Use and Health (NSDUH) between 2004 and 2012. NSDUH is a series of nationally and state-representative surveys on MH and substance use behavior by the U.S. civilian, noninstitutionalized population aged 12 or above. The majority of the NSDUH interview is conducted by audio computer-assisted self-interviewing (ACASI) technology, a highly private and confidential mode that encourages honest reporting of sensitive topics (SAMHSA 2013a,b).

The analytic sample includes low-income adult respondents aged 18–64 with behavioral health conditions during the past year prior to the NSDUH interview. We defined low-income adults as those with household incomes below 200 percent of the FPL, since they constitute the target population for the majority of the Section §1115-waiver expansions during the study period. We derived two subsamples with different types of behavioral health conditions. The first subsample includes low-income adults classified as having past-year serious psychological distress (SPD) according to the Kessler-6 (K6) scale. The K6 scale is one of the most widely used screening tools for serious MH problems in the household population and strongly indicative of a probable diagnosis of Diagnostic and Statistical Manual (DSM)-IV mood and anxiety disorders (APA 2000; Kessler et al. 2002, 2003). The second subsample includes low-income adults classified as having a past-year substance use disorder (SUD) according to a set of questions derived directly from the DSM-IV diagnostic criteria. The DSM-IV-based questions assess the symptoms and impairment related to alcohol use and/or illicit drug use (APA 2000; SAMHSA 2013a,b). We identified approximately 28,400 low-income adult respondents classified with past-year SPD and 24,900 classified with a past-year SUD for analysis.

Study Variables

The outcome variables were assessed with measures of current health insurance coverage and past-year access to behavioral health care. Health insurance coverage was measured using a dichotomous indicator for whether the respondents reported being uninsured at the time of the NSDUH interview.

Past-year access to behavioral health care was measured using several dichotomous indicators for the SPD subsample and for the SUD subsample. Among those with SPD, we created indicators for whether the respondents reported: (1) perceiving an unmet need for MH treatment, (2) receiving any treatment for MH problems in an outpatient setting[3] or an inpatient setting,[4] and (3) receiving any prescription medication for MH problems during the past year prior to the NSDUH interview.

Among those with an SUD, we created indicators for whether the respondents reported: (1) perceiving an unmet need for SUD treatment, (2) receiving any SUD treatment in a specialty setting (i.e., a specialty outpatient setting, an inpatient/partial hospital settings, or a residential/rehabilitative setting), and (3) having any emergency department (ED) visit related to SUD. An SUD-related ED visit is often intended for crisis intervention and stabilization and considered to be a proxy for inappropriate and costly "last-resort" SUD treatment (McGeary and French 2000; Rockett et al. 2005; Budnitz et al. 2006; Dave 2006; Vitale and Van de Mheen 2006).

The key independent variable of interest is an indicator for the implementation of Medicaid expansions under the Section §1115 waiver in 14 states between 2004 and 2012 (Table 1). We assigned the expansion indicator a value of 1 for each full month subsequent to the effective date of the expansion,[5] and a value of 0 for the remaining periods and for the remaining states serving as comparison states. This month-to-month matching minimizes the potential measurement error from misclassification of pre-expansion and postexpansion outcomes.

In addition to examining the effect of the previous waiver expansions as a whole, we are also mindful of the policy flexibility built in the Section §1115 waiver and the importance of scrutinizing the potential heterogeneity across individual components of the waiver. We therefore identified four important, measurable components that can be included in a typical Section §1115 waiver and lead to heterogeneous policy effects. The first component is the central mechanism of the expansion: a Medicaid enrollment approach that directly enrolls the expansion population in Medicaid versus a premium assistance approach that provides the expansion population with subsidies for the pur-

Table 1: Summary of Implementation and Key Components of Section §1115-Waiver Expansions for Low-Income Adults between 2004 and 2012

		Income Thresholds		*Key Dimensions*			
State	*Effective Time*	*Parent*	*Childless Adult*	*Central Mechanism*	*Enrollment Caps*	*Premium/Cost Sharing*	*Limited Benefits*
Pre-ACA "HIFA states"							
Utah	2004/11	45% → 150%	0% → 150%	Premium Ass.	Yes	Low	Yes
Iowa	2005/07	33% → 200%	33% → 200%	Medicaid Exp.	No	Low	Yes
Idaho	2005/07	43% → 185%	0% → 185%	Premium Ass.	Yes	Low	No
New Mexico	2005/12	29% → 200%	0% → 200%	Premium Ass.	No	High	No
Oklahoma	2005/12	34% → 200%	34% → 200%	Premium Ass.	No	High	Yes
Massachusetts	2007/05	133% → 200%	100% → 200%	Premium Ass.	No	Low	No
Arkansas	2007/01	18% → 200%	18% → 200%	Premium Ass.	No	High	Yes
Vermont	2007/10	0% → 185%	0% → 150%	Medicaid Exp.	No	Low	No
	2007/10	185% → 200%	150% → 200%	Premium Ass.			
Indiana	2008/01	25% → 200%	25% → 200%	Medicaid Exp.	Yes	Low	Yes
Wisconsin	2008/02	185% → 200%	n/a (0%)	Premium Ass.	Yes	Low	No
	2009/01	n/a (200%)	0% → 200%	Premium Ass.			
Maryland	2010/01	36% → 116%	0% → 116%	Medicaid Exp.	No	Low	No
Post-ACA "early adopters"*							
District of Columbia	2010/07	n/a (200%)	0% → 200%	Medicaid Exp.	No	Low	No
Minnesota	2011/08	n/a (275%)	75% → 250%	Medicaid Exp.	Yes	Low	No
California	2011/07	100% → 200%	0% → 200%	Medicaid Exp.	Yes	Low	No

Note: New Jersey and Washington are two notable exceptions among the states that used the Section §1115-waiver to get a jumpstart on the ACA Medicaid expansion. Labeled as "early adopters" though, these two states used the waiver to move people from a tailored state-funded program to a more comprehensive standard Medicaid program (Sommers, Kenney, and Epstein 2014). Since these two states did not expand coverage to the previously uninsured people, they fall short of being classified as "expansion" states in our study.

chase of qualified private plans. We created two indicators for the implementation of these two mechanisms for expansion in a given state during a given month. We created three additional indicators for other key dimensions of the Section §1115 waiver, including (1) an enrollment cap, (2) a relatively high premium and/or cost sharing compared to a standard Medicaid program, and (3) limited benefits for important health care services, with the focus of our study being limited MH and SUD treatment benefits.

We included a rich set of individual- and state-level characteristics that may be correlated both with the individual decisions about coverage and access and with the decisions of state policy makers about Medicaid expansions (Table 2). Individual-level covariates include (1) age, (2) gender, (3) race/ethnicity, (4) self-rated health, (5) household income as a percent of the FPL, (6) urban residence, (7) marital status, (8) family status, and (9) educational attainment. State-level covariates include (1) state unemployment rate, (2) state average personal income, and (3) state median household income. We also included (4) a policy indicator for state implementation or refinement of MH and SUD parity laws to account for concurrent policies during the study period that may affect coverage for and access to behavioral health care. State parity laws refer to a set of insurance regulations on employer-sponsored insurance (ESI) plans that require the benefits for MH and SUD treatment to be offered on par with or "no more restrictive" than comparable medical/surgical benefits (Busch 2012). Finally, we included state-level measures of (5) per capita State Mental Health Agency expenditures on MH treatment and (6) per capita number of publicly funded SUD specialty treatment facilities as proxies for local funding and infrastructure capacity.

Analytic Strategy

We estimated the effect of state implementation of Medicaid expansions for low-income adults under the Section §1115 waiver on individual health insurance coverage and access to behavioral health care. We conducted separate analyses for low-income adults with SPD and for those with an SUD. For each outcome variable in each subsample, we estimated two model specifications. In the first model, we used a single dichotomous indicator for the implementation of the Section §1115-waiver expansions. In the second model, we decomposed the single policy indicator into five indicators representing the central mechanisms and other key components of the waiver.

We used a quasi-experimental difference-in-differences (DD) design with state and year two-way fixed effects to account for unobserved state

Table 2: Descriptive Summary of Individual- and State-Level Covariates in States with versus without Implementation of Section §1115-Waiver Expansions for Low-Income Adults between 2004 and 2012

	SPD Subsample		*SUD Subsample*	
Low-Income Adults with SPD/SUD	*(1) Expansion States Mean (SD)*	*(2) Comparison States Mean (SD)*	*(3) Expansion States Mean (SD)*	*(4) Comparison States Mean (SD)*
Individual-level covariates				
# Age	34.4 (12.9)	36.1 (13.0)	31.1 (11.6)	32.3 (11.9)
% Male	37.7 (48.5)	37.3 (47.8)	64.6 (47.8)	62.8 (48.3)
Race/ethnicity: Non-Hispanic White (ref.)				
% Hispanic/Latino	23.6 (42.5)	15.6 (36.3)	28.9 (45.3)	18.0 (38.4)
% Non-Hispanic African Black	10.9 (31.2)	18.1 (38.5)	11.4 (31.8)	20.3 (40.2)
% Non-Hispanic Asian	5.22 (22.3)	1.73 (13.0)	3.21 (17.6)	1.38 (11.6)
% Other origins	4.96 (21.7)	3.38 (18.1)	5.18 (22.2)	3.64 (18.7)
Self-reported health: excellent (ref.)				
% Very good	25.1 (43.4)	24.6 (43.1)	30.4 (46.0)	32.1 (46.7)
% Good	32.7 (46.9)	30.8 (46.2)	32.2 (46.7)	32.5 (46.9)
% Fair/poor	28.4 (45.1)	34.0 (47.4)	19.1 (39.3)	20.8 (40.6)
Household income: <100% FPL (ref.)				
% Living 100–200% FPL	54.0 (49.8)	48.8 (50.1)	45.3 (49.8)	47.8 (50.0)
Urbanicity: non-CBSA (ref.)				
% Living in a micropolitan	11.1 (31.4)	13.7 (34.4)	9.35 (29.1)	12.1 (32.7)
% Living in a metropolitan	82.1 (38.3)	77.6 (41.7)	85.0 (35.8)	81.4 (38.9)
Marital status: married (ref.)				
% Never married	49.6 (50.0)	44.6 (49.7)	63.6 (48.1)	60.6 (49.0)
% Separated/divorces	2.62 (16.0)	3.62 (18.7)	1.03 (9.58)	1.38 (11.7)
% Widowed	19.8 (39.8)	24.5 (43.0)	14.6 (35.3)	18.6 (38.9)
Family status: childless (ref.)				
% Parents with dependent children	40.0 (49.1)	40.7 (49.1)	31.1 (46.3)	30.3 (46.0)
Education: college graduate (ref.)				
% Some college	27.1 (44.5)	26.2 (44.0)	29.0 (45.4)	29.6 (45.7)
% High school graduate	34.2 (47.5)	35.0 (47.7)	30.9 (46.2)	30.0 (45.8)
% Less than high school	28.0 (44.9)	30.5 (46.0)	15.9 (36.6)	18.6 (38.9)
State-level covariates				
% Unemployment rate	7.01 (2.60)	6.99 (2.29)	7.23 (2.75)	7.03 (2.30)
$ Average personal income (10K)	3.94 (0.63)	3.76 (0.55)	3.99 (0.65)	3.78 (0.54)
$ Median household income (10K)	5.54 (0.70)	5.04 (0.63)	5.56 (0.68)	5.07 (0.63)

Continued

Table 2. *Continued*

Low-Income Adults with SPD/SUD	*SPD Subsample*		*SUD Subsample*	
	(1) Expansion States Mean (SD)	*(2) Comparison States Mean (SD)*	*(3) Expansion States Mean (SD)*	*(4) Comparison States Mean (SD)*
$ SMHA spending (1K per resident)	0.12 (0.08)	0.12 (0.07)		
# SUD facilities (per 1K residents)			5.25 (1.45)	5.47 (2.66)
Observations	≈6,600	≈21,900	≈5,800	≈19,100

FPL, federal poverty level; SMHA, state mental health agency; SPD, serious psychological distress; SUD, substance use disorder.

heterogeneity and national secular trend in health insurance coverage and access to behavioral health care that are systematically correlated with Medicaid expansions (Wooldridge 2010).[6] We estimated logistic regressions in light of the dichotomous nature of our outcome variables. For ease of interpretation, we converted the regression coefficients into marginal effects, which can be interpreted as the percentage point change in an outcome associated with state implementation of the Section §1115-waiver expansions (i.e., the policy indicator changing from 0 to 1). We clustered standard errors at the state level to correct for the within-state serial correlation in a DD context (Bertrand, Duflo, and Mullainathan 2004).

RESULTS

SPD Sample: Effects of Medicaid Expansions on Coverage and Access

Among low-income adults with SPD, we found that state implementation of Medicaid expansions under the Section §1115 waiver was associated with improvements in health insurance coverage, perceived access to MH treatment, and realized access to MH treatment (Table 3). The implementation of the Section §1115-waiver expansions reduced the rate of being uninsured from 32.1 percentage points to 30.2 percentage points (Table 3: Model 1.1; $p < .05$). The implementation of the waiver expansions also reduced the probability of perceiving an unmet need for MH treatment by 2.2 percentage points (Table 3: Model 2.1; $p < .05$) and increased the probability of receiving outpatient/inpatient MH treatment by 1.5 percentage points (Table 3: Model 3.1; $p < .01$). Our estimates also suggest a marginally significant increase in

Table 3: Estimated Effects of Section 1115-Waiver Expansions on Health Insurance Coverage and Access to MH Care among Low-Income Adults with SPD

Low-Income Adults with SPD ($N \approx 28{,}400$)	*(1) Uninsured*		*(2) Perceived Unmet Need*		*(3) MH Treatment*		*(4) MH Prescription*	
	Model 1.1 Mean, % (SE, %)	*Model 1.2* Mean, % (SE, %)	*Model 2.1* Mean, % (SE, %)	*Model 2.2* Mean, % (SE, %)	*Model 3.1* Mean, % (SE, %)	*Model 3.2* Mean, % (SE, %)	*Model 4.1* Mean, % (SE, %)	*Model 4.2* Mean, % (SE, %)
Estimated policy effects								
§1115-waiver expansion	−1.89* (0.91)		−2.20* (1.09)		1.48** (0.55)		1.87† (1.13)	
Main mechanism								
Medicaid expansion		−4.77** (1.68)		−2.63 (1.59)		1.72*** (0.45)		1.88 (1.61)
Premium assistance		−3.85** (1.42)		−2.04** (0.66)		1.97** (0.83)		2.74 (4.28)
Other key dimensions								
Enrollment caps		2.98† (1.75)		−0.04 (1.52)		−0.93 (1.82)		−0.40 (1.50)
High cost sharing		1.73 (1.43)		1.85 (5.62)		−0.80 (1.09)		1.09 (4.04)
Limited benefits		1.09 (1.93)		1.44 (3.31)		−0.27 (2.73)		−0.43 (1.81)
Predicted baseline means	[32.06%]	[32.36%]	[30.30%]	[30.28%]	[28.36%]	[28.27%]	[37.62%]	[37.58%]

Note: $^{\dagger}p < .10$; $*p < .05$; $**p < .01$; $***p < .001$.
SPD is classified according to Kessler-6 scales and indicative of a probable diagnosis of DSM-IV mood or anxiety disorder.
Baseline predicted means in square brackets are calculated as the average of predicted probabilities when setting the policy indicators of interest to 0 and leaving the other covariates as the observed values.
95 percent confidence intervals in parentheses is calculated based on state-clustered standard errors.
MH, mental health; SPD, serious psychological distress.

the probability of receiving prescription medication for MH problems by 1.9 percentage points (Table 3: Model 4.1; $p < .10$).

When decomposing the single policy indicator into a set of individual components of the waiver, we found that the direct Medicaid enrollment approach and the "private" premium assistance approach to the Section §1115-waiver expansions both improved coverage and access among low-income adults with SPD (Table 3: Model 1.2, Model 3.2, and Model 3.3). States that provided the expansion populations with private premium assistance saw a significant reduction in the rate of uninsurance and a significant increase in the receipt of MH treatment comparable to the changes in states that enrolled the expansion populations in Medicaid programs. The presence of other waiver components (i.e., an enrollment cap, a relatively high amount of premium/cost sharing, and limited behavioral health benefits), on the other hand, may counterbalance the improvements in coverage and access among low-income adults with SPD. However, we are unable to precisely estimate these offset effects due to lack of statistical power.

SUD Sample: Effects of Medicaid Expansions on Coverage and Access

Among low-income adults with an SUD, we found significant improvements in health insurance coverage and in perceived access to SUD treatment that were associated with state implementation of the Section §1115-waiver expansions (Table 4). The implementation of the waiver expansions reduced the rate of being uninsured from 40.6 percent points to 37.8 percent points (Table 4: Model 1.1; $p < .05$) and reduced the probability of perceiving an unmet need for SUD treatment by 1.3 percentage points (Table 4: Model 2.1; $p < .05$). Our estimates also show a marginally significant increase in the probability of receiving specialty SUD treatment by 0.9 percentage point (Table 4: Model 3.1; $p < .10$), which can be indicative of an improvement in realized access to SUD treatment among low-income adults with an SUD.

With respect to the effects of individual components of the Section §1115 waiver on coverage and access, the SUD subsample and the SPD subsample have broadly similar patterns (Table 4: Model 1.2, Model 2.2, and Model 3.2). The direct Medicaid enrollment approach and the "private" premium assistance approach both improved health insurance coverage and perceived access to behavioral health care. A noteworthy estimate is the relative effect of the two approaches on the realized access to SUD treatment: the direct Medicaid enrollment approach increased the probability of receiving specialty SUD treatment by 1.9 percent points (Table 4: Model 3.2; $p < .01$), whereas

Table 4: Estimated Effects of Section 1115-Waiver Expansions on Health Insurance Coverage and Access to SUD Treatment among Low-Income Adults with SUD

	(1) Uninsured		*(2) Perceived Unmet Need*		*(3) SUD Treatment*		*(4) SUD-Related ED Visit*	
Low-Income Adults with SUD ($N \approx$ 24,900)	*Model 1.1 Mean, % (SE, %)*	*Model 1.2 Mean, % (SE, %)*	*Model 2.1 Mean, % (SE, %)*	*Model 2.2 Mean, % (SE, %)*	*Model 3.1 Mean, % (SE, %)*	*Model 3.2 Mean, % (SE, %)*	*Model 4.1 Mean, % (SE, %)*	*Model 4.2 Mean, % (SE, %)*
Estimated policy effects								
§1115-waiver expansion	−2.79* (1.34)		−1.29* (0.62)		0.86† (0.48)		−0.24 (0.37)	
Main mechanism								
Medicaid expansion		−5.44* (2.27)		−2.96** (1.16)		1.92** (0.76)		−0.63 (0.40)
Premium assistance		−3.70* (1.72)		−1.57* (0.80)		1.04 (0.78)		−0.58 (1.07)
Other key dimensions								
Enrollment caps		0.53 (3.48)		0.34 (1.15)		−0.56 (0.51)		0.08 (1.09)
High cost sharing		1.59 (4.73)		1.71 (2.66)		0.64 (3.87)		1.69 (1.19)
Limited benefits		−0.44 (2.20)		1.16† (0.62)		−1.46 (1.52)		−0.54 (0.49)
Predicted baseline means	[40.56%]	[40.47%]	[7.71%]	[7.63%]	[8.80%]	[8.86%]	[2.18%]	[2.17%]

Note: $^{\dagger}p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.
Substance use disorder (SUD) is classified based on DSM-IV criteria, including abuse of or dependence on alcohol or illicit drug or both alcohol and illicit drug.
Baseline predicted means in square brackets are calculated as the average of predicted probabilities when setting the policy indicators of interest to 0 and leaving the other covariates as the observed values.
95 percent confidence intervals in parentheses is calculated based on state-clustered standard errors.

no significant change was associated with the premium assistance approach. Although we found the point estimates for the effects of the Medicaid enrollment approach to be larger than the effects of the premium assistance approach, we lacked the statistical power to pin down the statistical differences between the two approaches in the effects on improving coverage and access. The improvements in coverage and access, again, may be offset by other waiver components such as an enrollment caps, a relatively high premium/cost sharing, and limited behavioral health benefits. Nonetheless, we lacked statistical power to precisely estimate these offset effects.

Additional Results from Sensitivity Analyses and Comparison Analyses

To capture the dynamics of health insurance coverage from different sources, we broke down the single dichotomous indicator for being uninsured versus insured into a set of mutually exclusive indicators for whether the respondents reported: (1) being uninsured, (2) having Medicaid coverage but no private insurance (regardless of other coverage), (3) having private insurance but no Medicaid coverage (regardless of other coverage), (4) having both Medicaid coverage and private insurance (regardless of other coverage), or (5) having other coverage but neither Medicaid coverage nor private insurance. We further specified fully interacted triple-difference models to test whether the effects of the Section §1115-waiver expansions on health insurance coverage differ across low-income adults with SPD, those with an SUD, and those without such conditions. As shown in Table SA1, the estimated improvements in overall coverage were found to be largely driven by the increased rates of Medicaid coverage. We found no detectable "crowd-out" effect: the changes in the probabilities of having private insurance, having both Medicaid coverage and private insurance, and having other coverage were small and insignificant. Furthermore, we found that low-income adults with behavioral health conditions were no less likely to experience improvements in overall coverage and in Medicaid coverage than their counterparts without such conditions. In other words, when the Section §1115-waiver expansions were implemented, those with behavioral health conditions did not lag behind in gaining coverage from the expansions.

DISCUSSION

Our findings provide some of the first empirical evidence concerning the behavioral health implications of Medicaid expansions. We found that, among

low-income adults with behavioral health conditions, state implementation of the Section §1115-waiver expansions was associated with a reduction in the rate of uninsurance, a reduction in the probability of perceiving unmet needs for MH treatment and SUD treatment, and an increase in the probability of receiving MH treatment. The direct Medicaid enrollment approach and the "private" premium assistance approach to the waiver expansions have similar effects on improving health insurance coverage and access to care among low-income adults with behavioral health conditions. However, imposing an enrollment cap, a relatively high amount of premium/cost sharing and limits on behavioral health benefits may counterbalance the improvements in coverage and access to behavioral health care.

Our findings from the Section §1115-waiver expansions between 2004 and 2012 can inform policy makers about the behavioral health implications for Medicaid expansions in the post-2014 era. We anticipate that Medicaid expansions under the ACA's SPA provision may have a greater impact on improving health insurance coverage and access to behavioral health care than the previous Section §1115-waiver expansions. The impact of the ACA Medicaid expansions may even extend beyond the scope of the most generous waiver expansions, which enrolled the expansion population in a standard, comprehensive Medicaid program without an enrollment cap. In addition to the scope of the expansions per se, the ACA Medicaid expansions are also implemented in the context of other supportive ACA provisions and federal legislation. For example, MH and SUD treatment are recognized as "essential health benefits" that must be offered; and subject to the federal Mental Health Parity and Addiction Equity Act, MH and SUD benefits must be offered on par with comparable medical/surgical benefits (Busch 2012; Beronio, Glied, and Frank 2014). Furthermore, the Medicaid enrollees with a severe MH problem and/or SUD are designated as a "medically frail" group and provided with benefits for a broad range of evidence-based, recovery-oriented services that exceed the original "benchmark"/"benchmark equivalent" standards (Beronio, Glied, and Frank 2014). Therefore, one may expect Medicaid expansions under the ACA's SPA provision, coupled with other supportive ACA provisions and the federal parity act, to stimulate a marked increase in the demand for health insurance coverage and behavioral health care.

Despite the potential of the ACA Medicaid expansions to improve coverage and access to behavioral health care, an estimated 4 million low-income adults would fall into the "coverage crack" and remain uninsured as a result of their state policy makers opting not to expand Medicaid (Price and Eibner 2013). Many of these nonexpansion states have a disproportionately large num-

ber of uninsured adults with behavioral health conditions (SAMHSA 2013a,b). An alternative to the ACA's SPA provision is to use the traditional Section §1115 waiver as a more flexible and politically viable way to expand Medicaid. One of the main purposes of using the waiver in the post-2014 era is to redirect Medicaid funds into premium assistance programs that subsidize low-income adults for their purchase of Qualified Health Plans from newly created Marketplaces (Piotrowski 2013; KFF 2013). In this regard, our estimated effects of the premium assistance mechanism of previous waiver expansions may encourage further discussion on the role of the Section §1115 waiver in the post-2014 era. The Section §1115-waiver expansions have potential to be an effective alternative to the ACA Medicaid expansions in covering low-income adults, including the vulnerable group with behavioral health conditions.

Nonetheless, we caution that the estimated effects of Medicaid expansions on realized access to behavioral health care were generally found to be smaller than the effects on coverage and perceived access. The policy effects on realized access may be partially constrained by the system capacity for the supply of behavioral health care (Capoccia et al. 2012; Saloner and Lê Cook 2014). The behavioral health system has experienced rounds of major budget cuts in recent years and continues to suffer from inadequacy and a geographic imbalance in infrastructure and workforce (Mechanic 2012, 2014; Cummings et al. 2013, 2014). The system is likely to be stretched under full implementation of the ACA Medicaid expansions. In this regard, leveraging potential funding resources as well as care coordination and other innovative delivery models would play a critical role in helping the behavioral health system meet the growing demand arising from Medicaid expansions (Andrews et al. 2015; Hamblin, Verdier, and Au 2011). In addition to the potential constraints on system capacity, other logistical and attitudinal barriers to behavioral health care may also moderate the extent to which reduced financial barriers and expanded coverage can translate into tangible improvements in access to care (McCoy et al. 2001; Oleski et al. 2010; Mojtabai et al. 2011; Walker et al. 2015).

The study findings should be viewed in light of the following limitations. First, institutionalized individuals (e.g., in jails/prisons or hospitals), homeless or transient persons not in shelters, and military personnel on active duty were excluded from the NSDUH sample and consequently excluded from our study sample. It is worth bearing in mind that these excluded populations, despite their small population sizes, may represent some of the hard-to-reach groups that respond differently to Medicaid expansions from the general household population. Second, we were

unable to identify which low-income individuals from an expansion state were eligible for the Section §1115-waiver expansion in their state. The DD estimates, therefore, were diluted over a mixture of target and nontarget groups. Third, the measures of health insurance coverage and access to care in NSDUH were based on self-reported data and susceptible to misclassification. For instance, there could be a certain amount of ambiguity in self-reporting Medicaid coverage versus self-reporting private insurance when states adopted the private premium assistance approach. Therefore, we place more confidence in our estimates of the overall reduction in the uninsurance rates than the dynamic between private insurance and Medicaid coverage. Last, the estimates of policy heterogeneity should be interpreted with caution. When decomposing a single policy indicator into a set of indicators for individual components of a policy, it requires considerable policy variation and sample size in treatment states to generate sufficient statistical power and narrow the margins of error. Lack of power often makes it difficult to pin down the individual effects of each component and the statistical differences across them. In this regard, our findings only suggest the direction and possible magnitude of the main mechanisms and other restrictive components of the waiver.

Conclusion

We found that state implementation of Medicaid expansions under the Section §1115 waiver improved health insurance coverage among low-income adults with behavioral health conditions. The implementation of the Section §1115-waiver expansions was further associated with improvements in perceived and realized access to MH treatment as well as perceived access to SUD treatment. States implementing the direct Medicaid enrollment approach and those with the "private" premium assistance approach saw similar improvements in coverage and access. However, imposing an enrollment cap, a relatively high amount of premium/cost sharing, and limits on behavioral health benefits may have offset effects.

Our findings suggest that the ongoing Medicaid expansions under the ACA's SPA provision and the Section §1115 waiver in the post-2014 era have the potential to improve health insurance coverage and access to care among low-income adults with behavioral health conditions. Nonetheless, when debating and crafting Medicaid expansion policies and programs, policy makers should carefully navigate the balance between the financial and political

viability and the comprehensiveness of the expansions. They should also ensure that viable and comprehensive expansions are implemented in a supportive environment that can translate expanded Medicaid coverage into meaningful improvements in access to care.

ACKNOWLEDGEMENTS

Joint Acknowledgement/Disclosure Statement: The authors gratefully acknowledge the helpful comments on earlier drafts of this study from participants at the 2015 Academy Health Annual Research Meeting and seminar participants at University of Kentucky Center for Health Services Research. The authors declare that they have no relevant or material financial interests that relate to the research described in this study. The study was approved by the Emory University Institutional Review Board (IRB) through an expedited review procedure.

Disclosure: None.

Disclaimer: None.

NOTES

1. The income threshold for Medicaid eligibility is 133 percent of the federal poverty level (FPL) based on the Modified Adjusted Gross Income (MAGI). The MAGI rules under the ACA include a 5 percent of FPL disregard, making the effective income threshold 138 percent FPL.
2. As a means-tested social welfare program for the most vulnerable groups in society, Medicaid traditionally covered only certain categories of individuals and families (e.g., aged/blind/disabled individuals, pregnant women, children from poor families). Childless adults without disabilities were not eligible for Medicaid in most states regardless of their income level. The income eligibility threshold for adult members of poor families was much higher than the threshold for their dependent children. During the early 2000s, the national median income threshold for an adult from a low-income family was 60% of the FPL; in over 20 states the threshold was lower than 50% of the FPL (KFF 2015). Furthermore, a substance user who is disabled may still be deemed ineligible for Medicaid if his/her disability was solely caused by substance use (KFF 2015).
3. NSDUH defines an outpatient setting for MH treatment as a MH center; a primary care center; the office of a psychiatrist, psychologist, therapist, social worker, counselor, or a primary care doctor that was not part of a clinic; or a partial day hospital or day treatment MH program.

4. Although institutionalized individuals residing in long-term psychiatric facilities or other institutions for the entire year were not included in the NSDUH sampling frame, those who were institutionalized or hospitalized for a period but residing in households during most of the survey periods were included in the NSDUH sampling.
5. We used the first effective date if more than one expansion was implemented in a given state.
6. Tests of the parallel-trend assumption confirmed that the pre-expansion trends in coverage and access did not differ between expansion states and comparison states; checks for the lead and lag effects of the Section §1115-waiver expansions lend support to policy exogeneity of the waiver expansions. Furthermore, we specified two models for sensitivity analysis. The first model added state-specific linear trends to account for the unobserved state-level confounding factors that evolve over time at a constant rate; the second model aggregated the data from the individual level to the state level. The results from these sensitivity analyses were consistent with our main findings.

REFERENCES

Andrews, C. M., E. G. Guerrero, N. R. Wooten, and R. Lengnick-Hall. 2015. "The Medicaid Expansion Gap and Racial and Ethnic Minorities with Substance Use Disorders." *American Journal of Public Health* 105 (S3): S452–54.

APA (American Psychiatric Association). 2000. *Diagnostic and Statistical Manual of Mental Disorders: DSM-IV-TR.* Arlington, VA: American Psychiatric Publishing.

Atherly, A., B. E. Dowd, R. F. Coulam, and G. Guy. 2012. "The Effect of HIFA Waiver Expansions on Uninsurance Rates in Adult Populations." *Health Services Research* 47 (3pt1): 939–62.

Baicker, K., and A. Finkelstein. 2011. "The Effects of Medicaid Coverage—Learning from the Oregon Experiment." *New England Journal of Medicine* 365 (8): 683–5.

Baicker, K., S. L. Taubman, H. L. Allen, M. Bernstein, J. H. Gruber, J. P. Newhouse, E. C. Schneider, B. J. Wright, A. M. Zaslavsky, and A. N. Finkelstein. 2013. "The Oregon Experiment—Effects of Medicaid on Clinical Outcomes." *New England Journal of Medicine* 368 (18): 1713–22.

Beronio, K., S. Glied, and R. Frank. 2014. "How the Affordable Care Act and Mental Health Parity and Addiction Equity Act Greatly Expand Coverage of Behavioral Health Care." *The Journal of Behavioral Health Services & Research* 41 (4): 410–28.

Bertrand, M., E. Duflo, and S. Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?" *The Quarterly Journal of Economics* 119 (1): 249–75.

Buck, J. A. 2011. "The Looming Expansion and Transformation of Public Substance Abuse Treatment under the Affordable Care Act." *Health Affairs* 30 (8): 1402–10.

Budnitz, D. S., D. A. Pollock, K. N. Weidenbach, A. B. Mendelsohn, T. J. Schroeder, and J. L. Annest. 2006. "National Surveillance of Emergency Department Visits for Outpatient Adverse Drug Events." *JAMA* 296 (15): 1858–66.

Busch, S. H. 2012. "Implications of the Mental Health Parity and Addiction Equity Act." *American Journal of Psychiatry* 169 (1): 1–3.

Busch, S. H., E. Meara, H. A. Huskamp, and C. L. Barry. 2014. "Characteristics of Adults with Substance Use Disorders Expected to be Eligible for Medicaid under the ACA." *Psychiatric Services* 64 (6): 520–6.

Capoccia, V. A., K. L. Grazier, C. Toal, J. H. Ford, and D. H. Gustafson. 2012. "Massachusetts's Experience Suggests Coverage Alone Is Insufficient to Increase Addiction Disorders Treatment." *Health Affairs* 31 (5): 1000–8.

Center for Behavioral Health Statistics and Quality (CBHSQ). 2015. *Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health.* HHS Publication No. SMA 15-4927, NSDUH Series H-50. Rockville, MD: U.S. Department of Health and Human Services (HHS), Substance Abuse and Mental Health Services Administration (SAMHSA) [accessed on April 17, 2015]. Available at http://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf

Chen, C., G. Scheffler, and A. Chandra. 2011. "Massachusetts' Health Care Reform and Emergency Department Utilization." *New England Journal of Medicine* 365 (e25): 1–3.

Coughlin, T. A., S. K. Long, J. A. Graves, and A. Yemane. 2006. "An Early Look at Ten State HIFA Medicaid Waivers." *Health Affairs* 25 (3): w204–16.

Cuellar, A. E., and J. Cheema. 2012. "As Roughly 700,000 Prisoners are Released Annually, about Half will Gain Health Coverage and Care Under Federal Laws." *Health Affairs* 31 (5): 931–8.

Cummings, J. R., H. Wen, M. Ko, and B. G. Druss. 2013. "Geography and the Medicaid Mental Health Care Infrastructure: Implications for Health Care Reform." *JAMA Psychiatry* 70 (10): 1084–90.

———. 2014. "Race/Ethnicity and Geographic Access to Medicaid Substance Use Disorder Treatment Facilities in the United States." *JAMA Psychiatry* 71 (2): 190–6.

Dave, D. 2006. "The Effects of Cocaine and Heroin Price on Drug-Related Emergency Department Visits." *Journal of Health Economics* 25 (2): 311–33.

Garfield, R. L., S. H. Zuvekas, J. R. Lave, and J. M. Donohue. 2011. "The Impact of National Health Care Reform on Adults with Severe Mental Disorders." *American Journal of Psychiatry* 168 (5): 486–94.

Hamblin, A., J. Verdier, and M. Au. 2011. *State Options for Integrating Physical and Behavioral Health Care.* Baltimore, MD: Integrated Care Resource Center [accessed on April 17, 2015]. Available at http://www.integratedcareresourcecenter.com/pdfs/ICrC_bh_briefing_document_1006.pdf

Kaiser Family Foundation (KFF). 2013. "*Premium Assistance in Medicaid and CHIP: An Overview of Current Options and Implications of the Affordable Care Act*" [accessed on April 17, 2015]. Available at http://kff.org/medicaid/issue-brief/premium-assistance-in-medicaid-and-chip-an-overview-of-current-options-and-implications-of-the-affordable-care-act/

Kaiser Family Foundation (KFF). 2015. "*Trends in Medicaid Income Eligibility Limits*" [accessed on April 17, 2015]. Available at http://kff.org/data-collection/trends-in-medicaid-income-eligibility-limits/

Kessler, R. C., G. Andrews, L. J. Colpe, E. Hiripi, D. K. Mroczek, S. L. Normand, E. E. Walters, and A. M. Zaslavsky. 2002. "Short Screening Scales to Monitor Population Prevalences and Trends in Non-Specific Psychological Distress." *Psychological Medicine* 32 (06): 959–76.

Kessler, R. C., P. R. Barker, L. J. Colpe, J. F. Epstein, J. C. Gfroerer, E. Hiripi, M. J. Howes, S. T. Normand, R. W. Manderscheid, E. E. Walters, and A. M. Zaslavsky. 2003. "Screening for Serious Mental Illness in the General Population." *Archives of General Psychiatry* 60 (2): 184–9.

Kessler, R. C., O. Demler, R. G. Frank, M. Olfson, H. A. Pincus, E. E. Walters, P. Wang, K. B. Wells, and A. M. Zaslavsky. 2005. "Prevalence and Treatment of Mental Disorders, 1990 to 2003." *New England Journal of Medicine* 352 (24): 2515–23.

Kolstad, J. T., and A. E. Kowalski. 2012. "The Impact of Health Care Reform on Hospital and Preventive Care: Evidence from Massachusetts." *Journal of Public Economics* 96 (11): 909–29.

Long, S. K., K. Stockley, and H. Dahlen. 2012. "Massachusetts Health Reforms: Uninsurance Remains Low, Self-Reported Health Status Improves as State Prepares to Tackle Costs." *Health Affairs* 31 (2): 444–51.

Mark, T. L., L. M. Wier, K. Malone, M. Penne, and A. J. Cowell. 2015. "National Estimates of Behavioral Health Conditions and Their Treatment among Adults Newly Insured under the ACA." *Psychiatric Services* 66(4): 426–429.

McCoy, C. B., L. R. Metsch, D. D. Chitwood, and C. Miles. 2001. "Drug Use and Barriers to Use of Health Care Services." *Substance Use & Misuse* 36 (6–7): 789–804.

McGeary, K. A., and M. T. French. 2000. "Illicit Drug Use and Emergency Room Utilization." *Health Services Research* 35 (1 Pt 1): 153.

Mechanic, D. 2012. "Seizing Opportunities under the Affordable Care Act for Transforming the Mental and Behavioral Health System." *Health Affairs* 31 (2): 376–82.

———. 2014. "More People than Ever before are Receiving Behavioral Health Care in the United States, but Gaps and Challenges Remain." *Health Affairs* 33 (8): 1416–24.

Mojtabai, R. 2005. "Use of Specialty Substance Abuse and Mental Health Services in Adults with Substance Use Disorders in the Community." *Drug & Alcohol Dependence* 78 (3): 345–54.

Mojtabai, R., M. Olfson, N. A. Sampson, R. Jin, B. Druss, P. S. Wang, K. B. Wells, H. A. Pincus, and R. C. Kessler. 2011. "Barriers to Mental Health Treatment: Results from the National Comorbidity Survey Replication." *Psychological Medicine* 41 (08): 1751–61.

Oleski, J., N. Mota, B. J. Cox, and J. Sareen. 2010. "Perceived Need for Care, Help Seeking, and Perceived Barriers to Care for Alcohol Use Disorders in a National Sample." *Psychiatric Services* 61 (12): 1223–31.

Piotrowski, J. 2013. "Premium Assistance in Medicaid." Health Affairs: Health Policy Brief. June 6, 2013 [accessed on November 29, 2014]. Available at http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=94

Price, C. C., and C. Eibner. 2013. "For States that Opt Out of Medicaid Expansion: 3.6 Million Fewer Insured and $8.4 Billion Less in Federal Payments." *Health Affairs* 32 (6): 1030–6.

Rockett, I. R., S. L. Putnam, H. Jia, C. F. Chang, and G. S. Smith. 2005. "Unmet Substance Abuse Treatment Need, Health Services Utilization, and Cost: A Population-Based Emergency Department Study." *Annals of Emergency Medicine* 45 (2): 118–27.

Saloner, B., and B. Lê Cook. 2014. "An ACA Provision Increased Treatment for Young Adults with Possible Mental Illnesses Relative to Comparison Group." *Health Affairs* 33 (8): 1425–34.

SAMHSA (Substance Abuse and Mental Health Services Administration), Center for Behavioral Health Statistics and Quality (CBHSQ). 2013a. "National Survey on Drug Use and Health, 2004-2011 [data files and code books]." Rockville, MD: U.S. Dept. of Health and Human Services (HHS) Substance Abuse and Mental Health Services Administration Center for Behavioral Health Statistics and Quality [accessed on September 2, 2014] Available at https://www.datafiles.samhsa.gov, http://www.icpsr.umich.edu/icpsrweb/SAMHDA

SAMHSA (Substance Abuse and Mental Health Services Administration). 2013b. "Behavioral Health Treatment Needs Assessment Toolkit for States." Rockville, MD: U.S. Dept. of Health and Human Services (HHS) Substance Abuse and Mental Health Services Administration [accessed on November 29, 2014]. Available at http://store.samhsa.gov/product/Behavioral-Health-Treatment-Needs-Assessment-Toolkit-for-States/SMA13-4757

Sommers, B. D., K. Baicker, and A. M. Epstein. 2012. "Mortality and Access to Care among Adults after State Medicaid Expansions." *New England Journal of Medicine* 367 (11): 1025–34.

Sommers, B. D., G. M. Kenney, and A. M. Epstein. 2014. "New Evidence on the Affordable Care Act: Coverage Impacts of Early Medicaid Expansions." *Health Affairs* 33 (1): 78–87.

Vitale, S., and D. Van de Mheen. 2006. "Illicit Drug Use and Injuries: A Review of Emergency Room Studies." *Drug and Alcohol Dependence* 82 (1): 1–9.

Walker, E. R., J. R. Cummings, J. M. Hockenberry, and B. G. Druss. 2015. "Insurance Status, Use of Mental Health Services, and Unmet Need for Mental Health Care in the United States." *Psychiatric Services* 66(6): 578–584.

Wooldridge, J. M. 2010. *Econometric Analysis of Cross Section and Panel Data.* Cambridge, MA: MIT Press.

SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article:

Appendix SA1: Author Matrix.

Table SA1: Estimated Effects of Section 1115-Waiver Expansions on Sources of Health Insurance Coverage among Low-Income Adults with versus without Behavioral Health Conditions.